

**IN THE ABSTRACT**

Please amend the abstract as follows:

A method, computer program product and apparatus are disclosed for simulating operation of a logic network is simulated, according to which including partitioning logic operations in a network model are partitioned into clock domains and ranking the operations. Rank orderings are performed for operations in the respective domains. Some instances are identified of operations which are dependent on source operations from others of the domains. In a second set of orderings, pairs of the operations having common dependencies are then separated, such as by inserting nop's, so that they are separated by at least as many operations as the total number of operations in the domains of the respective source operations. All the operations of all the domains are then merged into an order having that has a certain relation to the respective domain orderings, but omitting omits any nop's that were inserted previously to achieve desired separation. Then, in a second merged ordering, the pairs of the operations having a common dependency are again separated to at least the extent as the previous separations, this time making. In the merged ordering, advantageous use is made of overlaps in required separations, so that the number of nop's are is reduced, to improve, which improves simulation time. Due to the separations of the selected operations, after one value is computed for one instance of an operation depending on a source operation, a next value is computed for the source operation before computing the next instance of an operation depending on the source operation. That is, maximal asynchronous behavior is exhibited in the simulation, to achieve full coverage of asynchronous events.